DEATH ORIENTATION AND THE SPECIALTY CHOICE AND TRAINING OF PHYSICIANS

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A DISSERTATION PRESENTED TO THE GRADUATE COUNCIL OF
THE UNIVERSITY OF FLORIDA
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE
DEGREE OF DOCTOR OF PHILOSOPHY

UNIVERSITY OF FLORIDA

1975

TO KATHY

ACKNOWLEDGEMENTS

I am most grateful to my chairman, Franz Epting, whose influence on my work and my life is beyond measure. I am deeply appreciative of both his substantive guidance and his friendship over the past four years.

I would like to thank Larry Severy specifically for his valuable help with the data analysis, but also for his reassurance, infectious enthusiasm, and uncanny ability to challenge and support at the same time.

While grateful for their interest and support, I would like to thank Dick McGee, Molly Harrower, and Sam Banks most for being models of other ways to be a psychologist, an exceedingly valuable contribution.

I would also like to state my appreciation to Lowell Hammer for his willingness to become a member of my committee so late in the game, and for showing me how one can get closer to some kids by yelling at them.

In addition there are many other people who deserve thanks: Jerry, Steve, and Ron, for their help with the data analysis; Sharon and Jimmy, for their help with the mailing; and Gretchen and her staff for their help with the interminable mimeographing.

Finally I would like to acknowledge the support of the Northeast Regional Data Center at the University of Florida for the grant of computer time.

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Abstract of Dissertation Presented to the Graduate Council
of the University of Florida in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

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December, 1975

Chairman: Franz R. Epting
Major department: Psychology

The counterphobic motivation and training effect explanations of the previously reported high fear of death of physicians were tested through the assessment and comparison of the death orientations of samples of first and last quarter medical and law students, physicians, and attorneys. In addition, the relationship of death orientation to medical specialty and a number of practice characteristics was explored. Participants in the study were 243 students and professionals who voluntarily returned a mail questionnaire consisting of measures of death threat, terminal illness threat, death anxiety, state anxiety, and trait anxiety. This sample represents a mean return rate of 22%, with a range of 10% to 50%, in the physician group and the law student groups, respectively. Data was analyzed by means of MANOVA, canonical correlation, and multiple regression techniques.

The hypothesized differences between beginning medical and law students in death orientation were not found, nor was the hypothesized trend toward a more negative death orientation from the beginning to the end of medical school. The only difference found among the student groups was a tendency for those in law to report more trait and state anxiety. Contrary to the investigator's hypotheses, physicians were not found to have more negative death orientations than attorneys, nor did the orientation of either group show a trend toward becoming more positive with age. The data did suggest that the physicians were somewhat more prone to identify with a terminally ill person than were the attorneys. Hypothesized relationships between medical specialty and death orientation, and certain practice characteristics (duration and intimacy of patient relationships, proportion of chronically ill patients, and mortality rate) and death orientation were, for the most part, not confirmed. It was found, however, that general practitioners tended to score significantly lower on the measure of death threat than the other physicians.

These results were interpreted as demonstrating the inadequacy of both the counterphobic motivation and training effect hypotheses, since both imply that the physician's death orientation should be more negative than that of a comparable but non-medical professional. An alternate hypothesis was proposed which suggested that any differences that might exist between the death orientation of the physician and the population at large could be secondary to high achievement motivation or some other factor common to professionals in both the fields of medicine and law. This hypothesis might also explain the relatively low death threat of the general practitioner. Also discussed was possible sample bias and cautions were given concerning the general application of the findings.

CHAPTER 1
INTRODUCTION

The purpose of the present research is the exploration of death orientation in the training and later career choices of the physician. The presentation will begin with the introduction and definition of the terminology and constructs to be used throughout the paper. A detailed discussion of death and the physician, including a review of the relevant literature will follow, culminating in a statement of the specific hypotheses to be investigated. Method, results, and conclusions will then each be discussed separately in that order with a final summary statement of the implication of the findings of the study.

Theoretical Constructs and Measurement

One of the most profound difficulties in psychological research in many areas is the absense of standard, well defined variables. In death research this problem has reached grand proportions. In the literature one can find studies of death anxiety, fear of death, death threat, death concern, and a number of other presumably similar constructs that are, for the most part, poorly defined, if at all.

In the present discussion, four death related constructs will be used: death anxiety, fear of death, death threat, and death orientation. To avoid confusion and ambiguity, each of these terms will be defined and the interrelationships of the four will be examined.

Since George Kelly's psychology of personal constructs (1955) offers a particularly lucid explication and differentiation of the concepts of anxiety, threat, and fear, this approach will be used as the theoretical foundation of the present discussion.

The Psychology of Personal Constructs

The psychology of personal constructs is a model of human psychological function developed by George A. Kelly. It rests on the assumption that personality development and character are determined by each person's desire to optimally anticipate events in the world. The anticipatory process is carried out through the formulation and application of a set of bipolar hypotheses, referred to as constructs. Each of these constructs serves to organize and attribute meaning to some part of the world. Bannister and Mair have described constructs as "ways in which some things are seen as alike and different from others" (1968, p.25). The things discriminated by a construct are called its "elements". An element may be anything from an abstract process or concept to a concrete object, person, or event. For example, many people in our culture use the construct "good-bad". Elements of this constuct might include love, crime, swimming, bicycles, pain, and rattlesnakes. Although all are elements of this constuct, its application might well result in the classification of love, swimming, and bicycles under the "good" pole, and crime, pain, and rattlesnakes under the "bad" pole. The organization of these elements is not simply a classification, for the application of each constuct to each element is seen by Kelly as a specific hypothesis, for instance the hypothesis that love is good, that crime is bad, and so forth. As hypotheses, each is subject to constant testing for validity, that is, the continued ability to accurately anticipate events. If a construct-hypothesis is found to lead to faulty predictions, if will be modified in some way.

Constructs are themselves organized in systems that allow for more complex predictions based on inter-construct linkages referred to as "lines of implication" (Hinkle, 1966). Thus the subsuming of "crime" under the "bad" pole of the construct in the above example might lead to predictions that criminals are "dangerous" and "violent" in addition to being "bad"

According to Kelly, the construct system is organized hierarchically, with relationships of superordination and subordination among the constructs that compose it. A construct is superordinate to another if it includes it as one of its elements. On the other hand, if a construct is subsumed by another, it is subordinate to it. In general, the more superordinate constructs tend to be more abstract. They are more permanent and play a more central role in the process of construing. The core constructs are among the most superordinate structures in the system. They are particularly important in that they govern a person's maintenance processes, they enable him to maintain his identity and sense of continuing existence . . . they cannot be changed in any way without disturbing the very roots of a person's existence" (Bannister and Mair, 1968, p.30).

Construct theory views each person's understanding of the world he encounters as a direct function of the organization and content of his idiosyncratic system of personal constructs. The whole of his experience is filtered through this matrix of meaning which extends itself into the outside world through its channeling effects on perception at one end, and its provision of a finite number of behavioral alternatives at the other.

Anxiety

The construct of anxiety has given rise to as much theorizing and research as any other in the area of personality psychology Of the multitude of theories that have been proposed to explain the phenomenon, probably the best known are the psychoanalytic, the neo Freudian, and the social learning points of view The later Freudian theory of anxiety, and the neo-Freudian theory, as represented by Karen Horney and Harry Stack Sullivan, view anxiety primarily as the organism's response to the frustration of primary and secondary needs Social learning theorists see anxiety in a somewhat different light as a secondary drive learned through association with pain Some also interpret anxiety as a response to approach and avoidance drive conflicts

Of late, however, explanations of anxiety have taken a distinct turn toward a more cognitive approach, placing emphasis upon such factors as expectation, inability to assimilate information, and conceptual incongruity (Epstein, 1972, Singer and Singer, 1972). Kelly's treatment of anxiety belongs in this group Unlike that of many other personality theorists, however, his definition of anxiety is relatively narrow and clearly differentiated from the constructs of fear and threat, which he discusses separately

Kelly defines anxiety as "the recognition that the events with which one is confronted lie outside the range of convenience of one's construct system" (1955, p.495). In other words, anxiety occurs when a person finds that his expectations and suppositions about the nature of the world are not adequate to explain some event or situation that is facing him Anxiety may be likened to a situation in which one can detect something coming toward him but cannot specify its nature

The result is the well known confusion and objectlessness of anxiety For Kelly anxiety is neither good nor bad, it is simply a sign to the person that there are some shortcomings in his system's ability to interpret the world around him.

Death anxiety The specific form of anxiety referred to as death anxiety may be seen as the reaction to death of a person for whom death is a great unknown, an as yet undefined mystery, the nature and implications of which are far from clear. The death anxious person is one who approaches death with ambivalence, contradictory attitudes, or perhaps none at all Consistent with this hypothesis, Lester (1967b) found that subjects who demonstrated inconsistent attitudes toward death on his fear of death scale had significantly higher scores overall It should be noted that Lester, like so many others, makes no clear distinction between fear of death and death anxiety, so the fact that his scale is called a "fear of death" scale, rather than a "death anxiety" scale has little bearing on the present discussion

Coping with anxiety There are three basic ways of coping with anxiety The first, and unquestionably the most adaptive, is that of elaboration In elaboration the person actively goes about the revision and extension of his construct system to convert the anxiety-producing "unknown" to a reasonably well construed known" Elaboration implies the extension of the system's range of application as well as the revision of ambiguous or ill defined aspects of the system in the direction of greater clarity Particularly vigorous elaboration is known in personal construct theory as aggression Aggression from this point of view does not necessarily have the negative connotations that are normally associated with the word As Kelly points out, much creative and productive work can be thought of as a product of aggressive elaboration in an effort to resolve anxiety in one area or another.

A second way of handling anxiety is *loosening*. Loosening is an attempt by a person to extend the usability of his constructs by applying them to aspects of the world that he previously had ignored or had organized strictly through the application of other constructs. Constructs which previously had rather rigidly defined ranges of convenience are now applied to a wide variety of new elements. Although such loosened conceptualization may be effective in ameliorating anxiety, it has the additional effect of leading to varying predictions, that is, a fluid representation of the world which, at its extreme, can leave a person psychologically crippled. Such people often find it very difficult to take a strong stand on an issue, or to make important decisions. They seem to perceive simultaneously many different sides to each issue and to be unable to choose among them. Choices of this sort are generally made on the basis of the potential elaboration each alternative offers for the system or subsystem involved. In the loosened system, however, the choice becomes increasingly difficult, since the lack of structure makes the potential benefit of each alternative difficult to determine. Kelly (1955, p 497) and Bannister (1963) have both interpreted the thought disorder found in schizophrenia as symptomatic of extreme loosening. Note that typically the chronic, thought disordered schizophrenic is also relatively free of anxiety, thus demonstrating the potential effectiveness of this defense (Fish, 1962).

The opposite approach, that of *tightening* the system, may also serve to eliminate anxiety. In tightening, the person limits the domain of his constructs' application to areas that are known to be safe. In doing so he eliminates the awareness of the approach of the anxiety producing "something", hence, no more anxiety. Nevertheless, the cost of this relief is high, for the person who chooses this path is unable to keep up with the world around him, a world that is constantly changing, evolving farther and farther from the constricted, frozen image to which he clings. This structural tenacity may be recognized in his rigid and dogmatic adherence to his own point of view. Depending on the extent of his need to retain his rigid world view, the tight individual may even try to force the world to conform to his conception of it, thereby reducing the degree of inconsistency between the two. This phenomenon, which Kelly calls hostility, contrasts sharply with the adaptive approach found in the aggressive person, whose energies go toward the revision of his construct system to more closely approximate the nature of the world he finds around him.

The hostile, constricted posture has a number of potential consequences. The amount of manipulation of people and events which is required to maintain the integrity of a static and limited system in an ever changing world is enormous and must necessarily consume a tremendous amount of energy. In addition, behavior and physiology, as manifestations of the person's construct system, will both reflect the system's taught, rigid, and unyielding nature. The tightly organized person is likely to live a meticulous life, obsessed with details and minutiae, constantly watching out for potential challenges to the verity of his outlook. His body too is likely to show signs of stress, perhaps through headaches or gastrointestinal pathology, two maladies assumed to arise from physiologically expressed tension. There is even some clinical evidence to indicate that the rigid, hostile approach places unusual stress on the heart. Hutschnecker (1959) suggests that cardiac patients are typically very hostile, refusing to accept the physician's diagnosis or his warnings to remain quiet, in short manifesting precisely the behavior that is expected in a person with this sort of cognitive structure.

Threat

In personal construct theory, threat is viewed as "the awareness of imminent comprehensive change in one's core structures" (Kelly, 1955, p 489). Threat, then, occurs with a person's recognition that his fundamental understanding of the world is seriously flawed and in need of extensive revision. Since a person's whole construct system depends upon the validity of certain comprehensive core constructs, their invalidation disrupts the organization of the large majority of the remaining constructs within the system, transforming the person's previously well-ordered, meaningful world into a chaotic abyss.

Death threat. For the present purposes, the term death threat will be used to describe a condition in which an individual has explicitly or implicitly organized his world in such a way that it assumes his personal immortality, or, conversely, in such a way that it excludes death as a real personal eventuality. The high death threatened person, then, is one who would have to radically reorganize his beliefs about the nature of the world in order to accept death as a personal reality. "Personal" here is used in the broad sense, the death threatened person might be as upset by the impending death of a loved one or another with whom he identifies, as he would by his own impending death.

Fear

Fear, like threat, is also defined as the awareness of imminent change in core constructs. The difference between the two lies in the type of core constructs being challenged. In threat the endangered constructs are comprehensive, with far reaching implications; when a comprehensive construct falls, many more peripheral constructs fall with it, dragged down by strong lines of implication. Fear, on the other hand, arises when the constructs in question are new and incidental, thus having shorter and narrower ranges of implication. In fear, therefore, a much smaller portion of the system demands revision than in threat. In Kelly's own words, "One tends to be threatened by that which he construes comprehensively and is only made fearful by that which he construes simply" (1955, p. 494). Inasmuch as core constructs presumably may be classified along a gradient from incidental to comprehensive, fear and threat may be seen as different points on a single continuum. In other words, the difference between fear and threat may most easily be understood as one of quantity or intensity, not quality. For the sake of convenience, this continuum will be referred to as one of threat, with the understanding that the intermediate range would be most accurately described by the term fear.

Fear of death. The specific fear known as the fear of death will be experienced when a confrontation with death implies change in a relatively small and contained, though still significant, portion of a person's understanding of the world. A near-accident in an automobile, for example, may invalidate one's constructs of one's own driving ability and the behavior of other drivers, but is experienced as fear rather than threat because the person's understanding of the world remains essentially unchallenged.

Coping with threat and fear. Since fear and threat [illegible] a result of a perceived need for change in one's core constructs, the obvious and progressive means of overcoming these feelings would be to revise the system.

If, however, a person's need to retain the current system is so strong that revision is prohibited, there are various other avenues still open to him. As in the case of anxiety, he can either loosen or tighten his present system, or alternatively, he can tighten the bulk of his system while revising just that portion that demands change. The latter may be accomplished by means of a process known as suspension wherein a subsystem that is incompatible with the main system may be held in abeyance, with few, if any, implicative ties to the rest of the system. The personal construct notion of suspension is analogous to the analytic concepts of suppression, repression, and dissociation, and can also be used to explain the everyday phenomenon of forgetting. The theoretical explanations, however, are significantly different. "In contrast with some notions of repression, suspension implies that the idea or element of experience is forgotten simply because the person can, at the moment, tolerate no structure within which the idea would have meaning. Once he can entertain such a structure, the idea may become available within it" (Kelly, 1955, p.473).

Suspension does not necessarily mean that the subsystem cannot be used. On the contrary, one of the corollaries of construct theory states that "a person may successively employ a variety of construction subsystems which are inferentially incompatible with each other" (Kelly, 1955, p 83) To some extent, then, subsystems can exist and be applied independently, though, of course, not simultaneously

Summary: Anxiety, Threat and Fear

Implicit in the above discussion of anxiety, threat, and fear, is the understanding that all three feel much the same on a subjective level Each is characterized by basically the same distinctly disagreeable state, with its concomitant physiological arousal As stated above, threat and fear may be distinguished from one another on the basis of intensity. Anxiety, however, may be of virtually any intensity What differentiates it from the other two phenomena is its objectless quality, the inability to clearly see the source of the discomfort, or to know what one must do to avoid it. The "death" of death anxiety is an unknown, a mystery On the other hand, as the object of fear or threat, death has exceptionally well understood implications, it is seen clearly and defined, perhaps in a strictly negative sense, but defined nonetheless, allowing more definitive evasive behavior than is the case with anxiety Thus whether a person will suffer anxiety or some degree of threat, or for that matter, no discomfort at all, largely depends upon how he defines death in his own personal world

Death Orientation

Since of all those who suffer some problems concerned with death, some will be best seen as death anxious, others as afraid or threatened by death, and still others as a combination of both, it will be necessary to introduce another construct to be used as a convenient way to describe all of these people at once For the present purposes, the term death orientation will be used, modified with "positive" to indicate a personally meaningful and productive orientation, and "negative" to indicate a predominance of death anxiety, fear, and/or threat.

The Measurement of Death Orientation

At this point in time, a formidable array of approaches to the measurement of death orientations has been employed by investigators in the area. Most common has been the death attitude questionnaire or checklist (see, for example, Livingston and Zimet, 1965, Collett and Lester, 1970, Templer, 1970, and Dickstein, 1972), but physiological measures (see Alexander and Adlerstein, 1958, and Meissner, 1958), measures of perceptual defense (see Golding, Atwood, and Goodman, 1966, and Feifel and Branscomb, 1973), projective techniques (see Rhudick and Dibner, 1961, and Feifel and Branscomb, 1973), and cognitive, structural indices (see Jeffers, Nichols, and Eisdorfer, 1961, Magni, 1970, Lester, 1971, Degner, 1974, and Krieger, Epting, and Leitner, 1974) have also been used.

Paper and pencil questionnaires and checklists have been used with reasonable success in a variety of studies of death orientation. Templer's Death Anxiety Scale (Templer, 1970), for example, has been shown to correlate significantly, as hypothesized, with galvanic skin response (GSR) to death related words (Templer, 1971b), to have low but significant correlations with the Taylor Manifest Anxiety Scale and the Welsh Anxiety Scale (Templer, 1970), and to be inversely related to religious involvement (Templer, 1972). Positive results have also been obtained with Lester's Fear of Death Scale (Lester, 1967a), Livingston and Zimet's Death Anxiety Scale (Livingston and Zimet, 1965), Dickstein's Death Concern Scale (Dickstein, 1972), and others. The fact that hypotheses have been confirmed with some regularity through the use of such instruments would seem to indicate that some aspects of individual differences in death orientation can, indeed, be measured by self-report methods. Interviewing, another basically self-report method, has also yielded significant results (Feifel and Jones, 1968, Feifel, Hanson, Jones, and Edwards, 1967, Caldwell and Mishara, 1972). Nevertheless, it is obvious from the preceding theoretical discussion that in many cases a distinctly negative death orientation may be unavailable for direct observation or self-disclosure due to the successful operation of the defensive processes of loosening, tightening, or suspension. In other words, these methods, at their best, can only detect variance in conscious, reportable death orientation, allowing the significant, submerged portion of the iceberg to drift by unobserved. It is no wonder that the magnitude of the relationships reported in these self-report studies are generally modest. In addition, conscious self-report is particularly subject to distortion by experimenter effect and social desirability factors (Lester, 1967c; Jeffers *et al.*, 1961, Rhudick and Dibner, 1961). The latter has been borne out in a study by Crowne, O'Donovan, and Thompson (1967) in which it was shown that statements displaying a positive death orientation were valued significantly higher than those displaying a negative death orientation.

Projective techniques have also been used successfully and are assumed to bypass many of the problems associated with self report methods. The most commonly used of the projectives in this area of research have been the Thematic Apperception Test (TAT) (Rhudick and Dibner, 1961), and word association tests (Feifel and Branscomb, 1973). Inasmuch as the projectives were originally designed to collect material that was guarded against open self disclosure, they should provide a means for identifying at least some of those people with more covert negative death orientations Nevertheless, there is some question about how well the projectives bypass conscious distortion, and the scoring of these protocols always calls for a certain degree of subjective appraisal (Adcock, 1970; Murstein, 1968).

Physiological measures, most notably the GSR, have also been employed in hopes of overcoming some of the limitations of the more direct methods (Alexander and Adlerstein, 1958, Alexander, Colley and Adlerstein, 1957, and Templer, 1971b) It is reasonable to believe that devices sensitive to physiological arousal should be useful in identifying those persons experiencing anxiety, fear, or threat, at the time of testing Unfortunately, even with appropriate controls, there is no way of knowing for sure that death is the source of a subject's arousal In addition, if a person s negative death orientation is being successfully controlled through one of the protective processes, it will cause little or no arousal, and go undetected These same weaknesses may be seen in the various perceptual defense techniques (Golding, Atwood, and Goodman, 1966; Feifel and Branscomb, 1973)

The cognitive approach to death orientation assessment is relatively new, and has consisted, for the most part, of ratings of death on a selected subsample of semantic differential scales (Feifel and Jones, 1968, Wesch, 1971, Durlak, 1972, and Golding, Atwood and Goodman, 1966) The actual use of these scales has varied from simple evaluative ratings (Feifel and Jones, 1968) to a relatively sophisticated determination of connotative rigidity, that is, clustering on evaluative, potency, and activity factors, theoretically indicative of resistance to the death related concepts (Golding et al., 1966) This variety of approaches to the use of the semantic differential makes it misleading to discuss them together Simple evaluative ratings, for example the placement of death on the good bad dimension, and the subsequent determination of the meaning of this placement by the experimenter is a relatively weak approach It assumes that the scales have a static and universal meaning to subjects and experimenter alike This assumption is certainly unwarranted since many people who might well place death on all the "negative" ends of these dimensions in fact have distinctly positive death orientations The European existential tradition, for example, regards death extremely negatively, as an insult to man, the ultimate absurdity, and so forth (Becker, 1973 . Nevertheless, one can find many examples of positive death orientations among its adherents Ernest Becker, as an instance, while viewing death in this way, developed a creative, productive philosophy of life based largely on having the courage to live in the shadow of the glaring ignominy of death (Keen, 1974) Though death itself may be defined negatively, it may still be the critical element in a very positive death orientation.

The more sophisticated use of the semantic differential, incorporating the evaluative, potency, and activity dimensions, and hence the concept of semantic space, is undoubtedly a stronger technique It allows for a more accurate determination of the personal meaning of death, though still bounded by the specification of rating scales and the assumption of three dimensional semantic space (Bannister and Mair, 1968).

Another cognitive approach was recently introduced by Krieger (1972) which provides greater latitude in the assessment of the personal meaning of death This technique, referred to as the Threat Index TI was developed directly from the personal construct theory notions of threat and fear, and purports to assess the extent of potential threat of death for a given individual at a given time The TI has been shown to have some construct validity, high test-retest reliability, and high internal consistency (Krieger, Epting, and Leitner, 1974, Hays, 1974) Krieger and his colleagues concluded from correlations of the TI with the Lester (1967a) and Templer (1970) measures of death orientation, that it taps a somewhat different aspect of the general domain of death psychology than either of the self report measures

All in all, perhaps the most outstanding approach to assessment of death orientation up to the present was that recently undertaken by Feifel and Branscomb (1973) The individual instruments used in this study were fairly traditional, but their combined use and the investigators' rationale represent at once an important critique of the typical unidimensional studies that have been so prevalent in this field, as well as a methodological breakthrough Feifel and Branscomb argue that death orientation is not a unitary variable and that it must be measured at various levels of awareness to insure reasonably accurate assessment In their study they made an effort to tap into the death orientation of each subject at a "conscious level", a "fantasy level", and a "below the level of awareness" level The first level was measured by means of a structured interview, the second was measured by evaluation of free associations and subject ratings of death on six semantic differential scales, and the third was measured by reaction and recall times on a word association test (death-related versus neutral words), and by variation of the color-word interference paradigm Through the use of this multifaceted methodology, Feifel and Branscomb obtained data from each subject across the important dimension of awareness level Their results firmly support their arguments for multi level assessment They found that interlevel, within subject differences were the rule, not the exception Of the 371 subjects that participated in the research, only 19 were consistently "fearful", and only six were consistently "unafraid" of their own deaths, at all levels.

In summary it would seem that an adequate death orientation assessment must not only sample orientation at various points on the awareness dimension as in the Feifel and Branscomb research, but also must be broad and complex enough to detect individual differences in both the realms of anxiety and threat Accurate assessment further demands some attention to the personal meaning of death for each subject. and a methodology which allows this meaning to be expressed (Wimmichs, 1961; Krieger, 1972) In short, whatever the particular techniques chosen, to be effective they must reflect the theoretical dimensions that are known to be relevant to a person's death orientation Instruments chosen without these concerns in mind can hope to uncover, at best, only specific aspects of death orientation, ultimately giving a distorted view of the phenomena under scrutiny.

Death and the Physician

In spite of the widely held belief that we live in a generally death-denying culture, there are several groups of people in our society whose jobs bring them into regular, direct contact with death There are people who are trained to kill, others who are trained to care for the dead, and still others who are trained to prevent death The physician, as a member of the last group, is held in particularly high regard, for he is seen as the agent of Good in its everlasting struggle against the Evil of pain and death. As such, our modern physician is the strange child of the scientific revolution and a long line of shamans, priests, healers, and witchdoctors. For all our scientific sophistication, there remains a veil of superstition and magic around death and those who are empowered to combat it.

This romantic image of the doctor, replete with white coat, engaged in hand to hand combat with the Angel of Death, receives widespread support in the literature. The physician is implicitly regarded as invulnerable and immortal, in a class by himself, able to walk among the dying and the dead without harm (Kasper, 1959, Livingston and Zimet, 1965, Wahl, 1969, White, 1969). Along this same line of thought it has been suggested that the medical student's experience with his cadaver during training has powerful and important magical effects upon him (Schoenberg and Carr, 1972, Kasper, 1959). He touches and is touched by death and yet survives, unconsciously convinced of his immunity. There is no question that in the process of training, the physician is desensitized to corpses, blood, skeletons, and many other conventional symbols of death. The extent of such desensitization is, however, by no means certain. There is now some compelling evidence to indicate that physicians, in spite of their seeming bravado around its symbols, have a more negative death orientation than the general population (Feifel, Hanson, Jones, and Edwards, 1967). The implied coexistence of feelings of immunity and negative death orientation are consistent with the position advanced above that holds that death is most threatening to those whose cognitive structure precludes mortality as a personal reality.

Counterphobia or Training Effect?

Two rather different explanations have been suggested to account for the finding of negative death orientations among physicians The more popular of the two holds that counterphobic motivation lies behind the career choice of many physicians that is, that the physician chooses his profession in an attempt to manage his above average fears and anxieties concerning death and disease (Feifel, 1965, Kasper, 1959 Wahl, 1969, White, 1969). This argument parallels precisely the discussion of aggressive elaboration in an area of anxiety offered above. A man has an early confrontation with death which he is ill-equipped to handle In an attempt to overcome his anxiety he decides to become a doctor, supposing that training and experience in this profession will help him to elaborate his system and develop an understanding of death, and perhaps even power over it.

The other explanation suggests that the physician's negative death orientation is the result, not the cause of his training and experience (Livingston and Zimet, 1965) It holds that unlike the rest of the population, the doctor is faced with death frequently and cannot easily ignore it or deny its existence His orientation is the natural result of his abnormally high exposure This hypothesis implies that the protective strategies that can be used rather effectively in the relatively death free world of others cannot meet the more strenuous demands of the physician's world For him death is always there and cannot be denied The finding of Feifel *et al* 1967 that physicians tend to think about the death of another in more personal and less stylized terms than others would seem to lend some support to this view It indicates that the doctor is more keenly aware of the personal implications of another's death, and hence is more likely to experience some degree of threat in response to it

In the same study, Feifel and his colleagues reported a number of other interesting findings They found no difference in death orientation between relatively inexperienced doctors (less than five years of practice) and a more experienced group (greater than five years of practice) Although this result seems to favor the motivational argument, the death orientation of the sample of medical students was found to fall between that of the non-medical controls and that of the practicing physicians, indicating at least some element of training, experience, and acculturation.

In their cross-sectional study of medical students, Livingston and Zimet (1965) found a significant increment in death anxiety levels as students entered their third year of training (traditionally the first clinical year and the beginning of face to face patient contact). They guardedly interpreted this finding as a training effect, pointing out that death anxiety is not altogether independent of general anxiety Studies by Handel (1969), Templer (1970), and Dickstein (1972) have shown that death anxiety and general anxiety, as assessed by a variety of different scales, do show significant correlations, though the levels of these correlations are fairly low In light of this relationship, Livingston and Zimet suggest that the result may also be interpreted as reflecting an increase in general anxiety levels related to professional role performance or some other factor independent of death orientation Thus the interpretation of this finding remains an empirical question which has important implications for medical training as well as for the ultimate resolution of the theoretical controversy concerning the death orientation of the physician The answer awaits a replication study examining changes in general anxiety as well as death anxiety.

Another strangely missing piece of the puzzle is the death orientation of those who are about to enter medical school but have not yet begun their training It is necessary to determine whether the death orientation of the medical school candidate, before any special exposure, is any more negative than that of his peer who cooses a comparable profession, for example, law According to the counterphobia hypothesis, there should be a marked difference in death orientations between a group of prospective medical students and a group of prospective law students The training hypothesis, on the other hand, would predict their orientations to be roughly equivalent, the medical students diverging in a negative direction once their training begins

In light of the present empirical evidence, and the observational and anecdotal reports of physicians and others, it is probable that the actual state of nature is more complex than either the motivational or exposure hypothesis suggests It is most likely, as implied by Hendin (1973, p 136), that both views are correct, that before beginning their training many physicians to-be do have abnormally negative death orientations, but that this orientation is exacerbated by exposure to death and disease during training and clinical practice for a number of years thereafter Finally, the combined forces of cumulative experience and advancing age allow death to be gradually reconstrued as a personally meaningful reality, and the physician s death orientation slowly becomes more positive (Feifel and Branscomb, 1973, Kastenbaum and Aisenberg, 1972, p.86; Jung, 1960).

In terms of the present theoretical model, the efforts of the physician to alleviate his anxieties about death through elaboration of his construct system during his training are seldom successful Medical education, contrary to expectation, does not provide the material for a useful and adequate reconstruction of one's personal mortality It does foster on the other hand, a very detailed elaboration of knowledge and techniques useful for the prevention of the deaths of others, at least temporarily No solution to the problem of personal mortality is achieved, but the physician does acquire a lengthy and authoritative rule book that defines death as a heinous event in the lives of others, an event that is to be prevented whenever possible In the face of ever increasing levels of anxiety, the medical student incorporates this information within his system, seeing continued anxiety as the only alternative Without question, the wholesale adoption of the objective and rational system of the "medical scientist" offers some relief. Death is no longer a dark cloud of chaos and anxiety It has a definite place, purpose, object, and meaning Its place is the hospital. its purpose is biological and evolutionary its object is others and its meaning is medical failure.

Unfortunately the success of this construction in providing relief is limited for it rapidly becomes subject to substantial amounts of invalidating evidence In order to contend with the threat of widespread invalidation of his constructs, the physician tightens his system, occluding the perception of any inconsistent evidence Discouraged by this time with his attempts at elaboration, he now turns to the static protection of rigidity and hostility Nevertheless, the need for a truly satisfying system persists and revision slowly takes place as personal biological limitations assert themselves with increasing frequency as the doctor gets older.

Specialty Differences

Of course, it is a gross oversimplification to speak of all physicians as if they were one man with one particular kind of practice Actually, the modern physician may work in any of dozens of specialties and subspecialties Likewise, the patient population that a doctor may see can vary considerably The pathologist's patients are already dead, the psychiatrist's patients may be in perfect health; the medical researcher may have no real patients at all On the individual level, as is so often the case, neat generalizations break down It may well be, however, even within medicine, that death orientation to some extent may account for the variance in choice of specialty and practice characteristics Medicine is a broad enough field that those physicians with prominent negative death orientations may gravitate to a relatively death free practice, while others who feel a need to aggressively confront death can specialize in an active, high risk area

In an effort to explicate some of these issues, Livingston and Zimet (1965) investigated the relationships between death anxiety, authoritarianism, specialty choice, and number of years of medical training completed They reasoned that authoritarianism, as a rigid defensive style adopted in the face of unacceptable personal qualities, and characterized by dogmatism, inflexibility, power and hierarchic sensitivity, and the inability to tolerate ambivalence or ambiguity, should be inversely related to conscious death anxiety. Although authoritarianism has been traditionally seen in terms of repression, projection, and reaction formation, and as caused by certain aberrations of the parent-child relationship, "authoritarian" behavior and patterns of thought may also be seen as a manifestation of both systemic tightening and hostility, as discussed above. From both the analytic and the construct theory point of view, authoritarianism is a coping procedure that should lead to lower levels of manifest anxiety. Livingston and Zimet went further and predicted that the high authoritarianism-low death anxiety profile would be characteristic of students interested in surgical specialties, while the opposite profile would be typical of those students interested in psychiatry. They contend that surgery is the specialty in which hierarchical staff relationships, attention to detail, and need for decisiveness are most apparent. In addition there is a certain aura of death associated with surgery that would make life most uncomfortable for a death anxious physician. Psychiatry, on the other hand, is as far from death as one can go in medicine and demands an individual who has a high tolerance for ambiguity. Their results confirmed their hypotheses, indicating that death orientation may play an important role in the specialty choice of physicians.

Another study that bears on specialty differences is that of Feifel et al (1967). They compared the death concerns of internists, psychiatrists, and surgeons with those of control groups of medical students, seriously and terminally ill patients, and normal, healthy persons. Subjects participated in a structured interview, conducted by experienced psychologists and psychiatrists, concerning various aspects of their personal attitudes toward death. No significant differences were found among the specialties examined.

In partial contrast to the findings of Feifel et al (1967), Rosecrans (1973) reported some interspecialty differences in attitudes toward death among practicing physicians In many respects the content areas of the two studies were similar, but Rosecrans collected his data through the use of a questionnaire. Due to a low return, interpretation of his results must be guarded, but there were some sizable discrepancies among the specialties represented on some of the items Sixty percent of the surgeons in his sample claimed to think about death "very rarely". Only 20% of the psychiatrists, 24% of the internists, and 14% of the pathologists endorsed this response. Surgeons and pathologists were much less likely to admit a "strong fear or horror of death" (7% and 8%, respectively) than were psychiatrists and internists (35% and 24%, respectively). The findings lend additional support to the specialty hypotheses put forth by Livingston and Zimet (1965), indicating that surgeons and pathologists represent themselves as experiencing less manifest negative death orientation than their medical and psychiatric colleagues

It is possible that the inconsistency of these findings with regard to specialty differences may be due, in part, to the heterogeneity of types of practice and patient populations within a given specialty. A surgeon may build a practice in which he rarely, if ever, deals with death or dying patients. On the other hand, a psychiatrist may see many dying patients as a hospital consultant Thus, it may be misleading to assume that a given specialty accurately reflects the type of patient with which a practitioner may deal By the same token, there are many ways to relate to a patient, the doctor-patient relationship may be anything from formal and business-like to extremely personal and intimate A physician may also base his practice on short-term consultations, long-term continuous treatment or anything in between. Each of these factors, percentage of seriously ill patients, intimacy of the doctor-patient relationship, and duration of the relationship, is likely to be determined to a significant degree by the particular physician's ability to deal with death. It is very unlikely that a physician with prominent personal difficulties dealing with death and dying would establish and maintain a practice based on the long-term, personal care of seriously or terminally ill patients. It is possible, however, that the same physician might enter, for example, one of the surgical specialties that afford a great deal of personal insulation through operating protocol, ancillary personnel (nurses, interns, and residents), and the absence of long-term personal relationships with patients, while at the same time offering the opportunity to battle death directly and dramatically on the operating table.

Hypotheses

In summary, then, it may be hypothesized that:

I. The reported negative death orientation of physicians reflects in part a "counterphobic" career motivation, and in part the effects of exposure to death during and after training.

   a) Pre-medical students will have more negative death orientations than their pre-law peers.

   b) The death orientation of medical students will get progressively more negative during their training, while that of law students will remain stable.

II. The death orientation of both medical and law groups will gradually become more positive with age, though that of the law group will always be more positive than that of the medical group.

III To some extent a physician's choice of specialty, and to a greater extent, the specific characteristics of his chosen practice and patient population are determined by a combination of factors among which death anxiety, death threat, and general anxiety figure significantly.

a) Specialty and practice characteristics will both be significantly related to death orientation.

b) The relationship of practice characteristics to death orientation will be stronger than that of specialty to death orientation.

CHAPTER II
METHOD

Subjects

Subjects for this study were volunteers from seven populations of professionals and students. With the exception of the first group, all were respondents to a mail questionnaire. The names of the members of the first group were obtained through the Pre-professional Service Organization at the University of Florida. The initial contact with this group was made by telephone. Names and addresses of the professionals were taken from directories of the medical and legal professions. Table 1 defines the populations, the size of the sample from each, the number of males and females in each group, and the questionnaire return rate. The return rate for the law students can only be estimated since it was discovered after distribution that many of the students never check the departmental boxes in which the questionnaires were placed. As a result, some 50% of them were never picked up.

The return rate for the physician group was lower than was expected. As a check on representativeness, the proportions of psychiatrists, surgeons, general practitioners, and specialists in internal medicine in the sample were compared to those in the surveyed population by means of a Chi Square analysis which revealed no statistically significant differences ($Chi^2 = 1.27$; d.f. = 3). There were, however, significantly fewer representatives of the less popular specialties in the sample ($Chi^2 = 10.41$, p less than .01).

Table 1
Subjects

Population		Number in Sample	Males/ Females	Return Rate
Medical students, prior to training				
Pre-medical students at the University of Florida who had already been accepted by a medical school		15	8/7	n a.
First quarter medical students at the University of Florida		14	12/2	20%
Pre-training medical students	TOTAL	29	20/9	20%
Medical students, after training				
Last quarter medical students at the University of Florida		20	18/2	25%
Post-training medical students	TOTAL	20	18/2	25%
Practicing patient care physicians in Jacksonville, Gainesville, and Tampa, Florida:				
Psychiatry		8	8/0	12%
General and Family Practice		16	16/0	12%
Internal medicine and subspecialties		17	14/3	12%
Surgery and subspecialties		22	22/0	10%
Other specialties		26	25/1	6%
Physicians	TOTAL	89	85/4	10%
Law students, prior to training				
First quarter law students at the University of Florida		23	18/5	50%
Pre-training law students	TOTAL	23	18/5	50%
Law students, after training				
Last quarter law students at the University of Florida		19	16/3	50%
Post-training law students	TOTAL	19	16/3	50%
Practicing attorneys in Jacksonville		63	60/3	21%
Attorneys	TOTAL	63	60/3	21%
	GRAND TOTAL	243	217/26	

An additional ten respondents (four physicians, one attorney, one pre-medical student, one last quarter medical student, one first quarter law student, and one last quarter law student) were omitted from the sample because of significant departures from the written directions

Instruments

Threat Index The Threat Index (TI) is a technique introduced by Krieger (1972) based on Kelly s theory of personal constructs that purports to assess the extent of potential threat of death for a given individual at a given time It rests on the assumption that a person who is threatened by death will spontaneously describe death with one pole of a construct dimension while describing himself with the other In this way, it is thought, death is kept at a safe distance conceptually and is denied any real implications for the self Since, in Kelly s view, threat is "the awareness of imminent comprehensive change in one's core structures," (Kelly, 1955, p 490) or, to put it more simply, the realization that one needs to radically reorganize his personal version of the world in order for it to coincide with that actually seems to be true, one who denies his own personal mortality through cognitive separation of death and the self should be subject to greater degrees of threat This cognitive separation, referred to as a split, is operationally defined as the association of self" and "preferred self" with one pole of a construct and "death" with the opposing pole.

The TI has been shown to have some construct validity, high test-retest reliability, and high internal consistency (Krieger, Epting, and Leitner, 1974). These investigators concluded from correlations of the TI with other measures of death concern, that it taps a somewhat different aspect of the general domain of death psychology than the previously used self-report questionnaires of Templer (1970) and Lester (1967a). It was also judged that the personal meaning approach of the TI represented a significant step forward from the questionnaire and fixed format Semantic Differential techniques.

In spite of its strengths, the TI, in its original form, involved a lengthy individual structured interview which severely limited its potential use as a research instrument. To overcome the format difficulties while retaining the advantages of the TI procedure, Krieger and Hays (see Hays, 1974) developed a paper and pencil, self-administered form of the measure. In place of the construct elicitation phase of the original they provided their subjects with a list of 40 of the constructs most frequently elicited in the prior studies. Since these provided constructs had all emerged spontaneously in the previous research, it was felt that although provided, they would be generally more death relevant than, for example, an arbitrary set of semantic differential scales, although this assumption has not been tested directly.

A potential weakness of the original TI technique was that there was no way to check on the validity of a split to insure that a split on a given construct could legitimately be interpreted as an indication of death threat[1]. It was reasoned that a split could justifiably be interpreted as threat if an element known to be threatening split on each construct while another element known to be non-threatening did not. Provision was made in the paper and pencil TI for the inclusion of "comfortable" and "threatening" control elements, personally provided by each subject, to be placed on each construct in addition to the regular "self", "preferred self", and "your own death" elements. After placement of the five elements on all 40 constructs, the first 24 "valid" constructs (constructs on which the "comfortable" element was placed on the same pole as the self elements, while the "terrifying" element was placed on the opposite pole) were scored for death splits as in the original procedure. Since constructs that were valid for some were not valid for others, this procedure also served to restore some of the individuality of the protocols lost in the move to a provided construct format.

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[1] The author thanks Dr. Barbara Baldridge for pointing out this problem.

The revised paper and pencil TI was found to correlate highly with the original (rho = 0.77), to have higher test-retest reliability (rho = 0.82, with a four week interval) and to be independent of social desirability, the correlation with the Marlowe-Crowne scale being -0.12. Hays points out that since the Marlowe-Crowne scale may also be interpreted as a measure of defensiveness, this finding of independence between it and the TI tends to support his contention that the TI taps into death orientation at a "preconscious" level, probably somewhere between the "fantasy level" and "below the level of awareness" levels described by Feifel and Branscomb (1973).

In spite of Hays' concern and provision for eliminating seemingly "invalid" constructs, i.e. those that did not demonstrate the ability to discriminate between threatening and non-threatening elements nominated by the subject, he found that the number of death splits on the "valid" subset of constructs correlated at 0.98 with the number of splits on all 40 constructs, disregarding the validity criterion. It would seem then that there may be no real practical advantage in the more elaborate procedure, at least with the college population tested in this study The validity procedure was retained in the present study in case the provided constructs generated by a college population proved to be less meaningful to specialized professional and pre-professional groups

The provided construct form of the TI, then, has shown itself to be a psychometrically sound, easily administered scale, capable of assessing the threat aspects of orientation toward death. For the purposes of the present study one addition will be made to the procedure as described by Hays. After completing the placement of the five standard elements, each subject will be required to repeat the procedure once more using "a person suffering from a terminal illness" as the element to be placed on each dimension In this way the author hoped to obtain a measure of the cognitive distance each subject tends to place between himself and his image of the terminally ill person.

Death Anxiety Scale A measure of conscious death anxiety will be obtained through the use of Templer s Death Anxiety Scale (DAS). The scale itself, as well as reliability and validity data, including low but significant correlations with the Taylor and Welsch Anxiety Scales, may be found in Templer (1970). Templer and Ruff (1971) report means and standard deviations for the scale. An additional series of studies (Templer, 1971a, 1971b, 1972) lends support to the instrument's construct validity Since Krieger et al found no significant relationship between the DAS and the TI, the Templer Scale may offer certain information about a person s death orientation that is not obtained through the use of the TI alone.

State-Trait Anxiety Inventory The State-Trait Anxiety Inventory (STAI) is a self report anxiety scale developed by Speilberger, Gorsuch, and Lushene around the concepts of state and trait anxiety It consists of two forms, one designed to measure state anxiety (A-State), and the other, trait anxiety (A-Trait)

A-State is considered to be situationally dependent--to fluctuate with the presently felt anxiety of a person in different circumstances. The STAI purports to measure this construct by asking the subject to report how he feels at a particular moment in time. The A-Trait form was designed to assess the subject s relatively stable disposition toward the experience of anxiety, that is, how anxious a person feels he is in general The instructions on the A Trait form reflect this difference by asking the subject for a description of how he "generally" feels.

Data reported by Spielberger et al in the STAI Manual (1970) show the inventory to be a valid, reliable instrument capable of accurately representing state and trait anxiety.

For the present purposes, the STAI will be used to provide a measure of general disposition toward experienced, reportable anxiety as well as a measure of situationally specific anxiety Since the situational context in this stud, will be colored by thoughts and feelings about death and dying, it is thought that the A-State scores of subjects will to some degree reflect death specific anxiety

Biographical Data Sheet Every subject in the study will be asked to complete items dealing with such common variables as age, sex, nationality, marital status, number of children, and professional school The physicians will also be requested to report medical school attended, specialty or subspecialty (if applicable), length of typical patient relationship, proportion of chronic versus acute illnesses treated, proportion of patient population with potentially fatal illnesses or medical conditions, proportion of patient population that died as a result of their illness or condition in the past year, years of direct patient contact since completion of training, hospital affiliation, and present involvement in medical training (if any).

Procedure

Each subject was mailed a test booklet which included, in order, the following

1. Cover letter These letters differed somewhat depending on the particular subject's group membership.
2. TI;
3. DAS;
4. STAI;
5. Time sheet,
6. Biographical data sheet.

The TI must precede the DAS because the latter's specification of various attitudes toward death might serve to contaminate the placement of elements on the TI The STAI is placed last to optimize the assessment of any death anxiety aroused by the preceding measures

In the envelope with the test booklet was a postage paid, addressed, return envelope Samples of all materials except the STAI may be found in the Appendix The latter may be obtained through Consulting Psychologists Press.

Aside from being a practical way to collect large amounts of data, it was hoped that self-administered, through the mail, anonymous testing would provide a means for overcoming some of the difficulties noted by Caldwell and Mishara (1972) in their research on physicians and death In their study, only thirteen of the seventy three initially cooperative physicians approached agreed to participate in the interview once they discovered the subject of discussion was to be death and dying. Reflecting on the discouraging lack of participation, these investigators suggest that a higher response rate might be achieved through the use of an impersonal mail questionnaire, covering other content areas in addition to death and dying Except for the DAS, the present procedure did not involve much direct questioning about personal death feelings, thus incorporating both of Caldwell and Mishara's recommendations

CHAPTER III
RESULTS

The intercorrelations of the death orientation measures, based on the scores of all subjects, is shown in Table 2 The Threat Index scores, labelled "Death Threat", and "Illness Threat", represent the number of splits on all 40 constructs between "your own death" and the self elements, and the subject's image of a "terminally ill person" and the self elements, respectively Only 200 of the 243 subjects gave enough constructs meeting the criteria of "validity" to allow for the selection of a subsample for the alternate scoring discussed above The correlations between the scoring methods on these 200 subjects, however, were extremely high with regard to both death threat and illness threat (Pearson r = 0 95 on both), and tend to strongly corroborate Hays' conclusion that in practice the two methods yield identical results. The correlations are as expected except for that of death threat with death anxiety As mentioned above, these two measures were virtually orthogonal in a previous study using a college sample (Krieger et al., 1974).

Although less than 11% of the sample is female, a precautionary test of sex differences in death orientation was carried out prior to combining male and female subjects for the statistical tests of the hypotheses Using the MANOVA computer program by D.J Clyde (1969)[1],

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[1] Unless otherwise noted, it is this program that is being used in the remaining analyses

Table 2
Death Orientation Correlation Matrix

Measures	2	3	4	5
1. Death Threat	.5286 *p*=.001	.2308 *p*=.001	.0679 *p*=.146	.0651 *p*=.156
2. Illness Threat		.0059 *p*=.464	-.0343 *p*=.297	-.0338 *p*=.300
3. Death Anxiety			.3827 *p*=.001	.4020 *p*=.001
4. State Anxiety				.7583 *p*=.001
5. Trait Anxiety				

Variable	Means and Standard Deviations	
	Mean	Standard Deviation
Death Threat	20.811	9.623
Illness Threat	19.333	9.782
Death Anxiety	6.654	3.020
State Anxiety	34.819	9.900
Trait Anxiety	34.535	8.135

a multivariate comparison of the scores of the males and females in the student groups yielded an F of 0.887, which is not significant against the Wilks Lambda criterion, with five and 85 degrees of freedom. This finding justified the combination of data for the remaining analyses. A similar comparison of the pre-medical student group with the first quarter medical student group revealed no significant differences in death orientation and these two were combined, resulting in one large pre-medical training group.

Hypothesis I. The hypothesized differences between medical and law students, at the beginning and end of training, were tested by means of a two-way multivariate analysis of variance, with the five death orientation measures (death threat, illness threat, death anxiety, state anxiety, and trait anxiety) as dependent variables. Table 3 shows the means and standard deviations of each dependent variable in each cell as well as the multivariate F statistics for the main effects and interaction, with respective probabilities against the Wilks Lambda criterion. No significant differences were found. There are, however, some suggestions of a tendency for law students to be somewhat more anxious than medical students. Inspection of the univariate F ratios for profession differences reveals an $F = 3.574$, p less than .062 (*d.f.* = 1, 87) for state anxiety, and an $F = 4.086$, p less than .046 (*d.f.* = 1, 87) for trait anxiety. As is always the case, repeated analysis of non-independent data increases the probability of committing a type II error, so interpretation of this finding must be guarded in light of the non-significant multivariate F.

Hypothesis II. This hypothesis states that the death orientation of both physicians and attorneys will become less negative with age,

Table 3
Test of Differences between Medical and Law Students

Means and Standard Deviations

Variable		Pre-Training		Post-Training	
		Medicine	Law	Medicine	Law
Death Threat	$\bar{X}$	18.862	18.783	21.900	18.316
	s.d.	9.892	8.431	8.681	10.457
Illness Threat	$\bar{X}$	19.828	19.739	22.650	18.737
	s.d.	10.344	9.654	8.665	10.949
Death Anxiety	$\bar{X}$	6.724	6.783	7.650	6.842
	s.d.	2.153	2.876	2.477	4.004
State Anxiety	$\bar{X}$	33.034	38.435	34.500	36.263
	s.d.	7.790	10.945	9.191	10.780
Trait Anxiety	$\bar{X}$	32.793	38.174	34.850	35.421
	s.d.	5.532	7.691	6.343	11.325
	N =	29	20	23	19

Multivariate Tests of Significance using Wilks Lambda Criterion

Source	*F*	df	*p* less than
Profession	1.688	5,83	.147
Training	0.322	5,83	.899
Profession x Training	0.638	5,83	.672

Univariate Tests of Profession Differences

Variable	F	*MS*	*df*	*p* less than
Death Threat	0.598	52.983	1,87	.441
Illness Threat	0.645	64.889	1,87	.421
Death Anxiety	0.235	1.935	1,87	.624
State Anxiety	3.574	329.966	1,87	.062
Trait Anxiety	4.086	245.673	1,87	.046

though that of the attorneys will always be lower than that of the physicians. A two way multivariate analysis of variance, profession by three levels of age (38 and below, 39 through 50, and 51 and above), with the five death orientation measures as dependent variables, was computed and revealed no significant main or interaction effects. A summary of the analysis is presented in Table 4, along with means and standard deviations. Again, there are indications of a possible trend toward a difference between professions. In this case the univariate F ratios indicate that the attorneys tend to score higher on illness threat than the physicians ($F = 5.044$, p less than .026, $d.f. = 1, 146$). As in the above case, however, interpretation must be guarded for the same reasons.

Hypothesis III. The third hypothesis stated that there is a significant relationship between medical specialty and death orientation as well as between certain medical practice characteristics and death orientation. It was further hypothesized that the latter relationship is stronger than the former.

First, the overall relationship of practice characteristics (duration and intimacy of the doctor-patient relationship, percentage of chronic patients, and mortality rate) and specialty was computed by means of a canonical correlation, a statistical approach which determines the best possible relationship between two sets of variables through the use of unique linear weighting schemes for each set. Using the appropriate BIOMED computer program, BMD09M, the correlation was found to be 0.44. Squaring this value yields the percentage of shared variance, or the percentage of variance in one set of variables that may be "explained" by the other set. This value is 0.19, or 19%, which is not

Table 4
Test of Differences between Physicians and Attorneys by Age

Means and Standard Deviations

Variable	Age	Physicians - 38	39 50	51 +	Attorneys 38	39-50	51 +
Death	$\bar{X}$	21.357	21.026	19.917	22.935	24.950	20.500
Threat	s.d.	10.119	9.6.5	10.030	9.480	9.339	10.104
Illness	$\bar{X}$	17.500	18.154	16.309	20.097	23.000	19.500
Threat	s.d	9.866	9.949	9.857	9.840	8.259	9.357
Death	$\bar{X}$	6.643	5.923	6.556	6.581	7.850	5.167
Anxiety	s.d.	2.499	2.443	3.376	3.233	4.087	2.250
State	$\bar{X}$	34.214	32.026	34.361	37.935	34.300	34.417
Anxiety	s.d	6.974	10.148	10.637	11.753	8.535	7.354
Trait	$\bar{X}$	33.786	31.821	35.639	35.419	35.450	32.417
Anxiety	s.d	5.780	8.799	8.926	8.632	7.577	6.403
N =		14	39	36	31	20	12

Multivariate Tests of Significance Using Wilks Lambda Criterion

Source	F	df	p less than
Profession	1.764	5,142	.124
Age I vs. II & III	0.713	5,142	.615
Age II vs. III	0.764	5,142	.578
Profession x Age	1.117	10,284	.349

Univariate Tests of Profession Differences

Variable	F	MS	df	*p* less than
Death Threat	2.397	227.224	1,146	.124
Illness Threat	5.044	469.526	1,146	.026
Death Anxiety	0.689	6.574	1,146	.408
State Anxiety	2.879	288.492	1,146	.092
Trait Anxiety	0.758	51.623	1,146	.385

significant when compared to the greatest characteristic root criterion of 0.295, according to the procedure advocated by Harris (1975, p. 134). While not accounting for a significant proportion of the total variance in death orientation, the inspection of the weights of each variable suggests a tendency for physicians in general practice who feel they know their patients well to have relatively low death threat but relatively high illness threat. The second root, which is by definition orthogonal to the first, accounts for another 12% of the variance and may be interpreted as a tendency for surgeons with relatively many chronically ill patients and patients who die as a result of their illness or condition to deny death anxiety and to have low illness threat scores while reporting more non-specific anxiety than other physicians. The remaining three roots account for too little of the remaining variance to allow for the interpretation of meaningful trends. The five roots with their associated correlation coefficients and $\underline{R}^2$ values, and the weights associated with roots one and two appear in Table 5. It may be noted that some of the greatest weights for roots one and two were applied to one or another of the specialty categories. This finding tends to contradict the hypothesis which states that the practice characteristics should show a stronger relationship with the death orientation variables than specialty.

In order to explore the hypothesis more directly, a series of stepwise multiple regression analyses, using the BIOMED BMD02R program, was carried out. Each of the death orientation variables was regressed twice against specialty membership and the four practice variables, the first time with the specification that the specialties were to be entered as the first predictors, the second time with the specification

Table 5
Canonical Correlation of Death Orientation with
Medical Specialty and Practice Characteristics

Root 1	R_{can}	R^2_{can}
1	.440	.194
2	.345	.119
3	.260	.068
4	.199	.040
5	.053	.003

	Variable	Root 1	2
Set One:	Duration	-0.499	-0.220
	Intimacy	-0.665	0.045
	% Chronic	0.102	0.656
	Mortality Rate	-0.060	0.737
	Psychiatry	-0.512	-0.102
	General Practice	1.032	0.452
	Internal Medicine	-0.041	-1.034
	Surgery	-0.767	0.637
Set Two:	Death Threat	-1.277	0.275
	Illness Threat	0.629	-0.687
	Death Anxiety	0.252	-0.860
	State Anxiety	0.105	0.716
	Trait Anxiety	0.211	-0.178

that they be entered last. In this way it was possible to determine the unique variance accounted for by specialty alone, and practice characteristics alone, since all effects shared with variables entered previously in the equation are semi-partialed out of all variables that follow them.

Table 6 details the overall multiple R, and R^2 for each criterion as well as listing the regression statistics of the criteria on specialty alone, and practice characteristics alone, and the "unique" variance contributed by each in the full model. Comparison of the unique variance values to the corresponding restricted model $\underline{R}^2$ values indicates that rather than giving a more accurate description of the relationship between specialty and the criteria, and practice and the criteria, the former are inflated by the semi partialing procedure in the full model as can sometimes happen in the presence of "suppressor" variables. Under these circumstances, it is the restricted model correlations which give the better estimate of the magnitude of the relationships of interest. Comparing the specialty and practice multiple correlations with each criterion by means of Fisher's r to $\underline{z}'$ transformation, reveals no significant differences among the pairs of coefficients. The difference in the correlations with death threat, however, comes very close to significance, though in the direction opposite to that hypothesized, the relationship between specialty and death threat appears to be stronger than that of practice characteristics and death threat. Table 6 also shows that the regression of death threat on specialty is the only significant multiple correlation ($F = 2.518$, p less than .05). It must be remembered though that the overall multivariate statistic, the canonical correlation, failed to reach significance

Table 6
Multiple Regression of Death Orientation on
Medical Specialty and Practice Characteristics

Full Model: Specialty and Practice Characteristics

Criterion	*R*	R^2	*F*	*df*	Unique Variance	
					Specialty	Practice
Death Threat	.3814	.1455	1.702	8,80	11.4%	3.8%
Illness Threat	.2817	.0794	0.862	8,80	4.3%	5.7%
Death Anxiety	.2971	.0883	0.968	8,80	6.3%	2.6%
State Anxiety	.2773	.0769	0.964	7,81	1.9%	6.1%
Trait Anxiety	.2430	.0590	0.627	8,80	2.6%	3.9%

Restricted Model: Specialty

Criterion	*R*	R^2	*F*	*df*
Death Threat	.3272	.1071	2.518*	4,84
Illness Threat	.1507	.0227	0.483	4,84
Death Anxiety	.2491	.0621	1.389	4,84
State Anxiety	.1260	.0159	0.339	4,84
Trait Anxiety	.1421	.0202	0.433	4,84

Restricted Model: Practice Characteristics

Criterion	R	R^2	*F*	*df*
Death Threat	.1779	.0316	0.686	4,84
Illness Threat	.1903	.0362	0.789	4,84
Death Anxiety	.1586	.0252	0.542	4,84
State Anxiety	.2412	.0582	1.297	4,84
Trait Anxiety	.1821	.0332	0.720	4,84

* *p* less than .05

thus limiting the interpretation of this lower order finding.

Visual inspection of the data through graphic plots of Y against Y' for the regressions, and the vectors of the composite scores against each other for the canonical correlation, revealed no noticeable departures from linearity and hence no need to introduce quadratic or cubic terms into the models (Harris, 1975, p. 34 and p. 65).

The results of the previous analyses suggest that there may be some interesting interspecialty differences. To test for the presence of any such differences in death orientation, a one-way multivariate analysis of variance was computed across the five specialty categories: psychiatry, general practice, internal medicine, surgery, and miscellaneous other specialties. No overall significant differences were found on the multivariate level, though there were some suggestions of a trend toward a difference between the general practice physicians and the specialists ($F = 1.805$, p less than .121 with $df = 5,80$). This finding, of course, coincides with the differential weightings on root one of the canonical correlation. Inspection of the univariate F ratios reveals that the multivariate trend is probably based on the death threat component, which has an F of 7.052 and is significant at p less than .009 ($df = 1,84$). The same problem of a non significant multivariate F occurs here, but in this case the difference is much larger and the risk of a type II error is proportionately lower. The multivariate statistics for the comparison of the general practice group with internal medicine, surgery, and other specialties may be found in Table 7. Note that with stepwise comparisons such as those presented here it may be assumed that since psychiatry was not found to

Table 7
Tests of Specialty Differences

Means and Standard Deviations

Variable		Psychiatry	General Practice	Internal Medicine	Surgery	Other Specialties
Death	$\bar{X}$	22.000	14.875	23.588	23.409	19.462
Threat	s.d.	9.943	8.547	8.300	9.879	10.116
Illness	$\bar{X}$	17.250	16.000	19.824	18.045	15.962
Threat	s.d.	12.407	9.259	10.236	9.136	9.998
Death	$\bar{X}$	6.750	5.625	7.176	5.409	6.731
Anxiety	s.d	2.188	2.391	3.468	2.987	2.631
State	$\bar{X}$	34.625	33.000	34.118	31.318	34.269
Anxiety	s.d.	12.682	9.987	10.295	7.876	10.702
Trait	$\bar{X}$	34.000	33.625	34.471	31.682	34.769
Anxiety	s.d.	9.024	7.518	8.125	7.214	10.470
	N =	8	16	17	22	26

Multivariate Tests of Significance using Wilks Lambda Criterion

Source	F	df	p less than
Psychiatry vs. GP+IM+S+Other	0.130	5,80	.985
GP vs. IM+S+Other	1.805	5,80	.121
IM vs. S+Other	0.478	5,80	.792
S vs. Other	1.436	5,80	.220

Univariate Tests of General Practice versus Internal Medicine, Surgery, and Other

Variable	F	MS	df	p less than
Death Threat	7.052	629.481	1,84	.009
Illness Threat	0.366	36.106	1,84	.547
Death Anxiety	0.964	7.712	1,84	.329
State Anxiety	0.007	0.684	1,84	.935
Trait Anxiety	0.000	0.006	1,84	.993

differ from the other groups taken together, the difference of general practice with the other groups may be extended to include psychiatry as well.

CHAPTER IV
DISCUSSION

Counterphobic Motivation versus Training Effect

The results indicate that neither of the hypothesized explanations of the previously found high fear of death of physicians (Feifel et al., 1967) is adequate. This study demonstrates the absence of any marked differences in death orientation between physicians and attorneys, and between medical students and law students, thus throwing into doubt both hypotheses since they imply the unique death orientation of medical professionals.

The medicine and law comparisons reveal only two possible trends. The first is that law students seem inclined to report slightly higher levels of non-specific anxiety on the STAI, a finding which, even if it were significant, would not seem to bear directly on the issues at hand without the corroboration of one of the death specific measures. The other trend in the data indicates a tendency for attorneys to put more cognitive distance between themselves and their images of terminally ill people than do physicians. This finding implies that attorneys are probably somewhat less likely to identify with very sick people than are physicians. The popular accusations of detachment and depersonalization in modern physicians are clearly not supported in these data, at least not on a cognitive level. One must wonder if it is not that the expectations for the physician are so high that his failure to meet them makes him seem especially cold, unfeeling, and aloof. These results indicate that he is certainly no more so than a comparable group of non-medical professionals, and perhaps even less so. This conclusion is similar to that of Feifel and his colleagues, who found the physicians in their sample to be more prone than controls to identify with the death of another (Feifel et al., 1967).

These findings do not necessarily contradict Feifel's report of high fear of death in physicians, since it is possible that both physicians and attorneys have more negative death orientations than the population at large. A review of some previous research shows college students to score, on the average, approximately four points lower on the measure of death threat than the subjects in the present study (Hays, 1974). Similarly, Templer and Ruff's (1971) norms for the Death Anxiety Scale tend to run up to two and a half points lower than the means presented here. Given this information, it could conceivably be maintained that the counterphobic motivation hypothesis is accurate and an independent explanation of the death orientation of the attorneys need be developed. It would, however, be considerably more parsimonious to posit a single explanation of the score elevations in both populations, if indeed these scores are proven to be significantly higher than those of the normal population. Such an explanation might be predicated on the existence of an as yet ignored factor, common to both professional groups, differentiating them from others, and being significantly related to death orientation. The construct of achievement motivation might well fit this description. It is probable that professionals differ from the norm along this dimension. It is also reasonable to speculate on a relationship with death orientation, since death threatens to cut off the achievement motivated person from that which he has fought so hard to attain in the past as well as from the achievements he anticipates in the future. The adequacy of this explanation is, of course, an empirical question that would require simultaneous assessment of achievement motivation and death orientation in professional and non-professional populations.

Medical Specialty and Practice Characteristics

The information concerning each physician's specialty, estimated duration and intimacy of typical patient relationship, proportion of chronically ill patients, and recent mortality rate, explained all together less than 20% of the variance in death orientation, a non-significant proportion of the total. The differential weights given the variables in the canonical correlation suggest that this relationship, if it is not simply a product of chance, may be interpreted as a tendency for physicians in general practice, who feel that they know their patients well, to have lower death threat but higher illness threat than other physicians. This profile would seem to coincide with the popular image of the general practitioner as less technologized than the specialist, and hence closer to limitations in his ability to overcome natural forces, one of the most significant of which is death. An alternative explanation of the G.P.'s lower death threat might arise from the suggested relationship between death orientation and achievement motivation. It may be assumed that the G.P. is neither as achievement or status conscious as the physician who continues his training in a particular specialty, and therefore also may be less threatened by death. With regard to illness threat, the G.P. tends to care directly for the everyday ills, while referring the extraordinary to a specialist. If he is, then, somewhat less comfortable with the seriously ill, it does not really matter, for he rarely is actively involved in their treatment. His discomfort with these patients may have even been a factor in his choice of general practice.

The second factor identified by the canonical correlation, explaining 12% of the variance in death orientation, may represent a tendency for surgeons with relatively many chronically ill patients and patients who eventually die as a result of their illnesses, to deny death anxiety and to have low illness threat scores, while reporting more non-specific anxiety than their colleagues. In other words, surgeons with demanding caseloads of chronically ill and dying patients, are inclined to identify with them and experience relatively high levels of general anxiety though they deny that their anxiety has anything to do with death and illness. Surgeons who fit this pattern may be unwilling to construe their anxiety as a sign of uncertainty about their work. It is as if they cannot afford to admit any weaknesses or doubts in this particular area.

While these interpretations do tend to confirm a number of the theoretical propositions expressed above, it must be remembered that the proportions of variance explained by these factors are non-significant. In fact, of all the interrelationships of variables implicit in these interpretations, the only one to be confirmed as significant in subsequent, finer analyses was the finding that the general practitioners in this sample are apparently less threatened by death than the specialists.

The overall non-significant canonical correlation implies that the constituent variables, when broken apart, will not be significantly related to the criteria. In general this is indeed the case, with the exception of an apparent significant relationship between specialty and death threat, specifically the previously discussed tendency for general practitioners to be less threatened by death than other physicians. It is significant that no differences were found between the specialities that traditionally have seemed most different from one another, psychiatry and surgery. The trends found by Livingston and Zimet (1965) among medical students, and by Rosecrans (1973) in his mail survey of physicians, were not replicated. The present findings are in close agreement, however, with Feifel et al. (1967) who found few significant differences among psychiatrists, internists, and surgeons. It would seem that physicians with a full range of orientations toward death are found in many, if not all, specialties. Only the general practitioner appears to be distinguishable from the rest on this dimension.

Even with only this minor discriminative power, specialty overall explained more variance in death orientation than practice characteristics, though the differences in no case reached statistical significance. This trend is in the direction opposite to that hypothesized. It may mean that death anxiety and threat play only a minor role in initial specialty choice, and are even less influential on the specific characteristics of a given physician's practice. Perhaps the physician cannot manipulate his practice and the type of patient he sees as freely as he might wish. He must be responsive to other financial, institutional, and social pressures that may run counter to his personal preferences.

Methodological Observations

Whenever one must draw conclusions from observations of a relatively small number of volunteers from a large population there is a risk of tapping an unrepresentative sample and therefrom deriving potentially misleading results Nevertheless, a full range of death orientation scores can be found in all of the subject groups in this study, which suggests that this variable, at least, was not a factor in the self-selection of the respondents

On the basis of return rate, the group most likely to be a biased sample is that of the physicians. The proportions of respondents from the specified specialty groups, however, are statistically similar to those in the population If there is a sampling problem within the physician group, it may reside in the subgroup comprised of miscellaneous specialties that were not represented in sufficient numbers to constitute separate specialty groups For this reason special caution must be taken in applying the conclusions of this study to specialty areas other than the four specifically tested, namely psychiatry, general and family practice, internal medicine specialties, and surgical specialties.

Summary and Implications

None of the three hypotheses was confirmed Some differences were observed, however, including two between the medicine and law groups. The first of these was a tendency for law students to be more anxious than medical students the second was a tendency for physicians to identify more closely than attorneys with their images of terminally ill patients

The only difference found among the physicians was that the general practitioners in the sample scored lower than the others on the measure of death threat Specialty and practice characteristics showed no significant overall relationship with the measures of death orientation employed in this study

Interpretation of these results gave rise to the speculation that if physicians actually do have more negative death orientations than most other people, it may be related to high achievement motivation or some other trait they share with attorneys as well as many other people The overall findings indicate, contrary to much of the literature in the area and to the specific hypotheses of the present study, that there is nothing intrinsic to the medical field that either attracts those with negative death orientations, or cultivates such an orientation in those who work within it The findings imply that a systematic investigation of the relationship between achievement motivation, as well as other similar constructs, and death orientation, may provide a more meaningful explanation for the possibly abnormally high fear of death of physicians.

APPENDICES

APPENDIX A
COVER LETTER: PHYSICIANS AND MEDICAL STUDENTS

Dear Doctor

In recent years a number of articles have appeared in the professional literature which have directly or indirectly criticized the physician's management of patients with terminal illnesses. I do not believe that it is coincidental that the vast majority of the critical voices belong to people working outside the areas of clinical medicine. Although I am a social scientist, and therefore also a non-physician, my research and experience in the hospital setting convinces me that the physician who is treating a dangerously ill person has a terribly difficult, and perhaps, at times, an impossible task that requires a person with some extraordinary skills and characteristics.

I would like to invite you to contribute a half-hour or so of your time to a research project that I am conducting. Through this research I hope to uncover some of the characteristics that differentiate physicians from other professional groups, that differentiate certain groups of physicians from others, and how these characteristics are related to the kind of specialty and practice a physician chooses.

You may notice that some of the research material is concerned with the general area of death and dying. I have chosen to focus my research here as a result of informal talks with medical students and physicians who spoke of their feelings about death and dying as being of great importance in determining the kind of practice they chose for themselves. In addition, as I implied above, I am interested in clarifying and perhaps correcting some of the positions that have been previously reported in the literature.

Inasmuch as my interests extend to training and experience effects, research packets similar to the one enclosed have been sent to pre-med students, medical students, practicing physicians, and a comparison group of law students and lawyers.

I appreciate the value of your time and sincerely hope that you can contribute the half-hour or so necessary to complete the enclosed packet. I am sure you realize that research is necessary for the expansion of knowledge. Without your participation and the participation of your colleagues in legitimate research projects like this one, the only information available will be inaccurate, incomplete, and distorted. Such misrepresentation can only hurt the physician in the long run.

All information collected in this project will be collected anonymously, and, of course, treated with the utmost confidentiality. To insure anonymity, please do not write your name on the booklet. If possible work straight through page by page, without turning back. It is very important that you make every effort to complete every item. If you must stop for any reason, please make a notation of the time you stopped, as well as the time you continued work.

If you so desire, I would be happy to send you a summary and interpretation of the results of the study. Just enclose a card with your name and address under separate cover and I will send you the findings as soon as the research is completed.

Let me take this opportunity to thank you for your time and cooperation

APPENDIX B
COVER LETTER, LAW STUDENTS AND ATTORNEYS

Dear Counselor:

I would like to invite you to participate in a research project I am conducting. I am interested in collecting data comparing a group of physicians and medical students to a comparable group of attorneys and law students with respect to several personality characteristics includings attitudes toward death and dying. With the help of this data I also hope to discover whether or not professional training has any effect upon the variables under consideration.

Your participation in this project would be greatly appreciated and could conceivably have a beneficial effect on the quality of care you might receive were you to be hospitalized with a serious illness. I appreciate the value of your time and sincerely hope that you can contribute the half-hour or so necessary to complete the enclosed packet. I am sure that you realize that legitimate research is necessary for the expansion of knowledge. Without your participation and the participation of your colleagues in projects like this one, the only information available will be inaccurate, incomplete, and distorted.

All information collected in this project will be collected anonymously, and, of course, treated with the utmost confidentiality. To insure anonymity, please do not write your name on the booklet. If possible work straight through, page by page, without turning back. It is very important that you do your best to complete every item. If you must stop for any reason, please make a notation of the time you stopped, as well as the time you continued work.

If you so desire, I would be happy to send you a summary and interpretation of the results of the study. Just drop me a card with your name and address under separate cover and I will send you the findings as soon as the research is completed.

Let me take this opportunity to thank you for your time and cooperation.

APPENDIX C
THREAT INDEX DIRECTIONS

The following directions each preceded an identical list of provided constructs which is reproduced in Appendix D.

TI page 1

Below is a list of bipolar dimensions. For each dimension please circle the side with which you see yourself more closely associated. For example, do you associate yourself more with the term "predictable" or "random"?

TI page 2:

For each dimension below circle the side with which you would prefer to see yourself more closely associated.

TI page 3

Name something, someone, or some event (real or fantasized) that terrifies you. Please be as specific as possible

____

For each dimension circle the side with which you most closely associate this terrifying thing, person, or event.

TI page 4

Name something, someone, or some event with which you feel very comfortable. Please be as specific as possible.

____

For each dimension circle the side with which you most closely associate this comforting thing, person, or event

TI page 5

For each dimension circle the side with which you most closely associate your own death.

TI page 6

Fix in your mind an image of a terminally ill person. This may be an image of someone you have known, or purely imaginary, or a combination of the two. For each dimension circle the side with which you most closely associate this person.

APPENDIX D
THREAT INDEX LIST OF PROVIDED CONSTRUCTS

predictable	-	random	productive		unproductive
empty	-	meaningful	learning		not learning
sad	-	happy	purposeful	-	not purposeful
personal		impersonal	responsible	-	not responsible
lack of control	-	control	bad	-	good
satisfied	-	dissatisfied	not caring		caring
relating to others	-	not relating to others	crazy	-	healthy personality
pleasure	-	pain	conforming		not conforming
feels bad	-	feels good	animate	-	inanimate
objective	-	subjective	weak	-	strong
alive	-	dead	useful	-	useless
helping others	-	being selfish	closed	-	open
specific	-	general	peaceful	-	violent
kind	-	cruel	freedom	-	restriction
incompetent	-	competent	non-existence	-	existence
insecure		secure	understanding	-	not understanding
static		changing	sick	-	healthy
unnatural	-	natural	stagnation	-	growth
calm	-	anxious	abstract	-	concrete
easy		hard	hope	-	no hope

APPENDIX E
DEATH ANXIETY SCALE

Directions Circle either true (T) or false (F) for each item

T F 1. I am very much afraid to die.

T F 2. The thought of death seldom enters my mind.

T F 3. It doesn't make me nervous when people talk about death

T F 4. I dread to think of having an operation.

T F 5. I am not at all afraid to die

T F 6 I am not particularly afraid of getting cancer.

T F 7 The thought of death never bothers me.

T F 8 I am often distressed by the way time flies so very rapidly.

T F 9 I fear dying a painful death

T F 10. The subject of life after death troubles me greatly.

T F 11 I am really scared of having a heart attack

T F 12 I often think about how short life really is.

T F 13. I shudder when I hear people talking about a World War III

T F 14 The sight of a dead body is horrifying to me

T F 15 I feel that the future holds nothing for me to fear

APPENDIX F
BIOGRAPHICAL INFORMATION SHEET: PHYSICIANS

Age ________

Sex: M F

Nationality. ____________________

Marital Status ______________________

Number of children ________

Medical school attended ______________________

Specialty or subspecialty (if applicable): ______________________

How long have you been practicing since the completion of your training? ____________________

Hospital affiliation (if any) ____________________________________

Are you presently involved in the training of medical students, interns, or residents? (circle appropriate groups)

What would you estimate to be the length of your typical patient relationship? (overall, not single contact):

one week or less
between a week and a month
between one and six months
between six months and a year
between one and five years
more than five years

Typically, how well do you know your patients? (Indicate your estimate by a slash through the line below)

close friend ___________________________________ stranger

What percentage of your patients is seeing you for treatment of

a chronic illness or condition? ________
an acute illness or condition? ________
a potentially fatal illness or condition? ________

What percentage of your patients died as a result of their illness or condition in the past year? ________

APPENDIX G
BIOGRAPHICAL INFORMATION SHEET MEDICAL STUDENTS

Age: __________

Sex. M F

Nationality _________________________

Marital Status _________________________

Number of children ______________________

Are you a:

Pre-med student __________,

First year medical student __________, or

Fourth year medical student ________?

What medical school or hospital are you affiliated with?

____

APPENDIX H
BIOGRAPHICAL INFORMATION SHEET LAW STUDENTS AND ATTORNEYS

Age ________

Sex: M F

Nationality: ______________________

Marital Status ______________________

Number of children: ______________________

Are you a:

Pre-law student __________,

First year law student ________,

Third year law student __________, or

Recent law school graduate __________?

Law school: ______________________

If you are an attorney, how long have you been practicing?

____

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Seth R. Krieger was born June 27, 1949, in New York City. He attended public school and graduated from Massapequa High School in June, 1967. The following September he entered Duke University in Durham, North Carolina, from which he received a Bachelor of Arts in psychology in June, 1971.

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I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Franz R. Epting, Chairman
Associate Professor of Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Richard K McGee

Richard K. McGee, Co-chairman
Professor of Psychology

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